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JUL 26 1973

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NWF/RFC #533
NIC #17452

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July 17, 1973

MESSAGE-ID NUMBERS

It has been noted that the IMP message format (specified in BBN Report 1822) constrains network users to low throughputs if messages are to be uniquely identified via the link number. We have recently implemented a change in the IMP/Host protocol which alleviates this difficulty. The link field in the IMP/Host and Host/IMP leaders has been extended to the right by four bits (in other words, it now uses bits 17 to 28 of the leader), and the name of the link field has been changed to the message-id field. We expect this field to be used to uniquely identify messages between the IMPs and the Hosts. All 12 bits in the message-id will be returned to the Host in RFNMs, INCOMPLETE TRANSMISSIONs, etc. Note that no ordering is implied by the use of the message-id field.

Given that the Host/Host protocol uses the old link field to identify connections, the additional four bits in the new message-id field might well be used to uniquely identify messages on a given connection (i.e., over a given link). Of course, there is no obligation for Hosts to uniquely identify their messages (the IMP subnetwork certainly doesn't care), so this change in the IMP/Host message format is completely backward compatible. In fact, since the receiving Host does not have to look at these extra four bits on arriving messages, the change is completely backward compatible even when senders of messages do use the extra four bits to uniquely identify messages.

Please store this RFC with your copy of BBN Report 1822 until 1822 is updated.